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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHUNG, JI YONG DAVID

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/989,928	Applicant(s) BOUDNIK ET AL.	
	Examiner Ji-Yong D. Chung	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION
RESPONSE TO AMENDMENT

Response to Remarks

1. Applicant's arguments and amendments filed on May 13, 2005, together with the Request for Continued Examination have been carefully considered but they are not deemed fully persuasive. Applicant raises many issues, which are discussed below.

The first issue Applicant raises with regard to 35 U. S. C. 102 rejections stated in the Final Office Action, dated June 23, 2005, is that the amendments to claims 1-3, 9 and 13 now insert the terms "test application" and "distributed test framework." Applicant asserts that the inclusion of the terms distinguishes the claimed invention over Wollrath et al. (Pat. No. 6,487,607, Wollrath hereinafter).

The problem with the argument is that term "test application" is not precise. Many applications may qualify as "test" applications, depending on their use. Supporting this view is expressed in lines 11-13, page 15 of the instant specification, wherein Applicant states the "test system" is not necessarily dedicated to testing. Wollrath's client can certainly be used to momentarily test a function from the client side, when something fails, and serve general computing function and thus can be labeled as the "test application." If term "test application" carries special meaning within the specification, it is implicit. However, the Office cannot distinguish the claimed invention based on such implied definition, when confronted with a potential ambiguity.

Note that Wollrath's system also operates in a distributed environment. RMI is specifically designed for such operation.

Applicant's argument with regard to 35 U. S. C. 103 is based on the idea that, because the independent claims overcome 35 U. S. C. 102 rejections, therefore, other claims that depend from them overcome 35 U. S. C. 103.

By the same logic, the Office's position against Applicant's argument in overcoming 35 U. S. C. 103 is based on its argument directed to Applicant's position on 35 U. S. C. 102 rejections.

Applicant's last and perhaps the strongest argument, at least substantively, is stated in pages 9-10 of the Amendment. Applicant explains that the launch request in the claimed invention does not include "a specific identification of the processing resource upon which the second test application is to be executed," whereas, in Wollrath, "RMI provides mechanism for remote calls over the network, provided it has information on the destination of the call."

There are two reasons why the amendment does not quite distinguish the claimed invention from the prior art reference. First, the claim employs a term "processing resource," which can refer to memory or any other resource associated with computing. If one interpreted "resource" as something other than a networked CPU or a computer, then, the added limitations would not convey the meaning described in the Remarks (e.g., a computer). As noted above, the Office cannot base its interpretation of the claim on implied definition. Should Applicant intend to limit the use of term "processing resource" to microprocessors, Applicant must either

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explicitly stipulate its meaning, in Remarks, or Applicant must make clear, by amending the claims.

Second, even if “processing resource” is viewed as a microprocessor, it is possible to view Wollrath’s client module (one that has been cited in the Office Action as corresponding to agent launcher) as a component separate from rmiregistry. In such interpretation, the module would supply “the required attribute” (i.e., the domain name of the “processing resource”) to the rmiregistry. To the module, the “processing resource” would be unidentified (i.e., its IP address is not known to the module), and the claim would read on Wollrath reference. See below, for the discussion of 35 U. S. C. 102.

In brief, claim language, in accordance with either of the above two possible interpretations fail to distinguish the claimed invention in the manner argued in pages 10-11 of the Remarks. Given the ambiguities in claim language, the Office is left to speculate, if Applicant’s amendment had been sufficiently precise to convey the intended meaning described in the Remarks, that Applicant’s system employs a dynamic call invocation. If so, the substantive issue to be resolved would likely become whether combining a dynamic call mechanism (e.g., CORBA Trader) and something akin to Wollrath’s system would have been obvious to one of ordinary skill in the art.

Whether such issues will be raised in future depends on Applicant’s response to the instant Office Action, and therefore they are not pursued further. It should be noted that Applicant would aid in substantively advancing the prosecution, should Applicant choose to

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sharpen those issues by further amendment. The outcome of further examination based on such issues is not known at this time, as it depends on additional prior art searches.

Cancellation of **claims 4, 10-12, and 14** are duly noted.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-3 and 9, and 13** are rejected under 35 U.S.C. 102(e) as being anticipated by Wollrath et al (U. S. Pat. No. 6,487,607, Wollrath hereinafter).

With regard to **claim 1**, Wollrath discloses method for launching remote applications in a distributed test framework, comprising the operation of:

using a first agent process having an agent launcher interface to launch a first test application having a call interface, wherein the call interface provides a reference to the first agent process such that the first test application and the first agent process communicate with each other during execution of the first test application [See step 701, Fig. 7. In RMI environment shown in Fig. 6, a class method (which would use the “first agent process” or

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method) must call a process that implements RMI interface; Java language requires the protocol. Any invocation of the RMI is performed by, first, referencing the proper class object cast into the interface type and then invoking one of the methods of the interface. Note that starting any program constitutes “launching.” As read “first agent process” is the method without the RMI component 602 in Fig. 6 (RMI registry). The communication is made during the execution of rmiregistry];

sending a launch request from the first application to the agent launcher interface using the reference to the first agent process as provided by the call interface of the first test application, wherein the launch request specifies a second test application to be launched, and wherein the launch request defines required attributes of an unidentified processing resource necessary to execute the second test application thereon [See step 703, Fig. 7. In Fig. 6, any class method that invokes RMI would cause the remote class object to load and launch the second application. The RMI call must contain attributes of a processing resource, because proper sequence of calls that locate the second application must be given service the “location” attributes of the processing resource. In other words, RMI service provides the mechanism of remote calls over the network. The call is not from the application without the rmiregistry, and therefore, at the time of the invocation, it is “unidentified” (i.e., only those resources with known IP address “identified”)];

operating the agent launcher to send a request to a system controller requesting identification of a processing resource having the required attributes necessary to execute the second test application [CPU or a computer is “system controller.” Any call from the “agent

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launcher” is sent to CPU for dispensing address (“identification”). Note that the system controller can also be viewed as JVM];

operating the system controller to identify the processing resource having the required attribute necessary to execute the second test application JVM or a processor is operated to “identify” the processing resource having the “required attribute” (domain name)]; and

launching the second test application on the identified processing resource having the attributes defined in the launch request [See step 707 in Fig. 7. Properly working RMI call would cause the remote method of loaded class to be executed (“launched”). In the launch request, note the domain name (“attribute”) must be given.].

With regard to **claim 2**, Wollrath discloses the second “agent” *executing on the identified processing resource*. Any Java program that has been started via RMI executes on the remote environment. See step 707, Fig. 7. The server is the processing resource.

With regard to **claim 3**, Wollrath shows *the second agent process that is registered with a look up service, the registering being configured to advertise the attributes of the identified processing resource to the system controller via the look up service*. See step 705, Fig. 7. RMI is an implementation of Java naming service. The second agent process (the remote object) must be registered, in order for its methods to be invoked. Rmiregistry advertises the domain names to a JVM’s or other processors.

Claims 9 and 13 substantively incorporate a subset of the limitations of claims 1-3 but in apparatus form rather than in method form. The reasons for the rejections of claims 1-3 apply to claims 9 and 13.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Wollrath. It would have been obvious to one skilled in the art at the time of the invention to modify steps disclosed Wollrath for the reasons provided below.

With regard to **claim 5**, Wollrath shows *the system controller that is configured to search the look up service to locate a processing resource having attributes substantially matching the attributes defined in the launch request*. See Fig. 5 for the lookup service.

The motivation for combining the use of lookup service with the steps Fig. 7 is as same as the sole purpose for the existence of the lookup service in Java environment: to locate a particular service. It is obvious to use the lookup service to locate a service, because that is what lookup services are for, whether the calling program is “controller” or “first agent.”

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6. **Claims 6-8 and 15-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wollrath in view of Jaworski ("Developer's Guide: Java 1.1") and "Process Manager 6.0 Programmer's Guide" (SUN hereinafter). It would have been obvious to one skilled in the art at the time of the invention to combine the features disclosed in Wollrath with those in Jaworski and SUN for the reasons provided below.

With regard to **claim 6**, Wollrath shows the method wherein

the second test application includes a second call interface.

Wollrath does not show *the second call interface includes a parameters hash table that provides initialization values for the second test application*. Jaworski shows an example of initialization parameters in an example Java program: see the constructor for class Hand on page 63.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use initialization, because the initialization method is a language construct; they are built into Java language itself to be used for setting the parameter values at the start of programs and during the construction of objects. (An analogy may help: one uses a steering wheel of an automobile to steer the car; the steering wheel is built into an automobile for the purpose of guiding the automobile. Incorporating the step of using the steering wheel into the process of controlling the automobile cannot render the control process any less obvious).

Wollrath also does not show passing initialization parameters by using hash table.

However, SUN shows on page 5, section 5, how hash table maybe passed as an argument for initialization.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use hash table to pass initialization values to another process, because using the hash table allows one to pass a large body of variable-value pairs, which maybe unknown prior to the execution of the first agent process, in a compact notation.

With regard to **claim 7**, neither Wollrath does not show, but SUN shows that *the agent launcher interface of the first agent process further includes parameters that provide initialization values for the second test application*. Hash table in SUN provides the initial parameters.

With respect to **claim 8**, Wollrath does not show, but SUN shows that *the initialization values provided by the parameters of the agent launcher interface of the first agent process can be passed to the second call interface via the parameters of the hash table of the second call interface of the second test application*. See page 5, section 5. The hash table is used to pass environment variable-value pair (of the calling process) for initialization of environment variables.

Claims 15-16 contain all the limitations of claims 6-8, but in apparatus form rather than in method form. The reasons for the rejections of claims 6-8 apply to claims 15-16.

Claims 17-18 include software versions of the subset of limitations discussed above in reference to claims 1-3 and 5-8. The reasons for the rejections of claims 1-3 and 5-8 apply to claims 17 and 18. Note that claim 17 cites “attributes of an unidentified processing resource necessary to execution the second test application are passed to the agent launcher process.” However, the limitation is merely a parameter passing mechanism in Java programming language; it is built into the language. For discussion of the added limitation, see the above discussion of claim 1, as well as the response to the Remarks.

With regard to **claim 19**, it speaks of “*the selected processing service is selected from a list of processing resources advertised on a lookup service.*” However, the limitation merely describes the function of location resolution in any Java lookup service. That is, when one uses a lookup service in any Java environment, the lookup service selects the requested service that resides on a particular device (selected from a list of multiple devices).

Claim 20 substantively cites a limitation that is a software version of the limitation cited in claim 2. The reasons for the rejection of claim 19, therefore, apply to claim 20.

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Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji-Yong D. Chung whose telephone number is (571) 272-7988. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ji-Yong D. Chung
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Art Unit: 2143


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